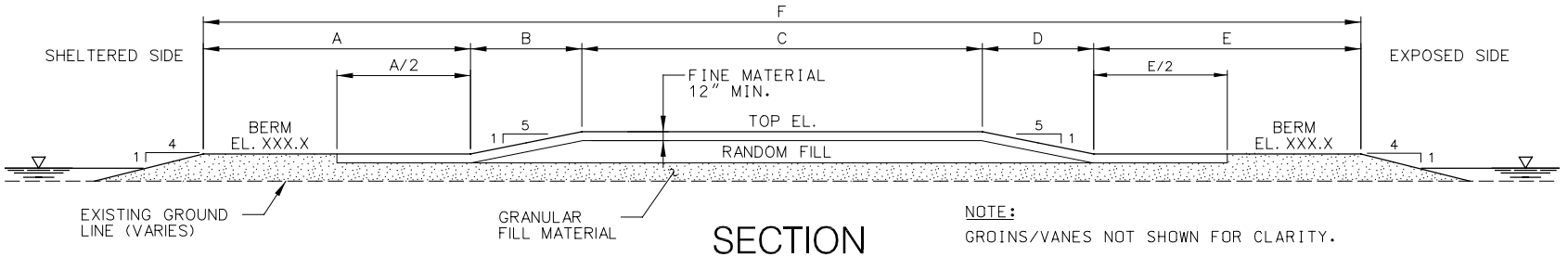
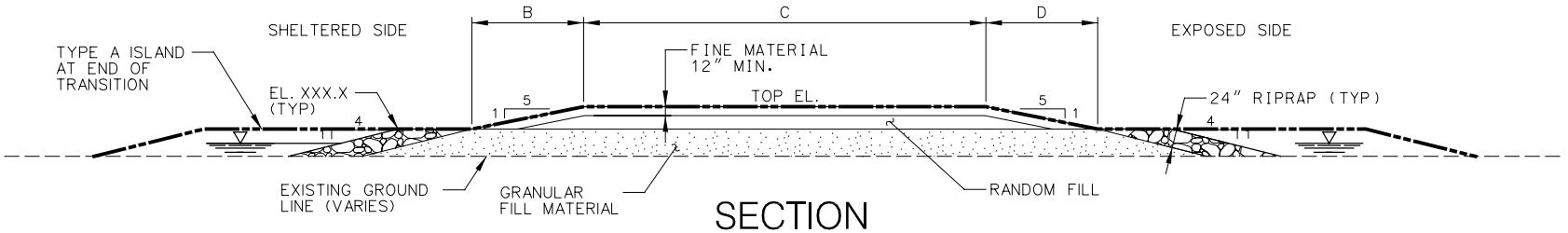


SECTION

TYPE A ISLAND

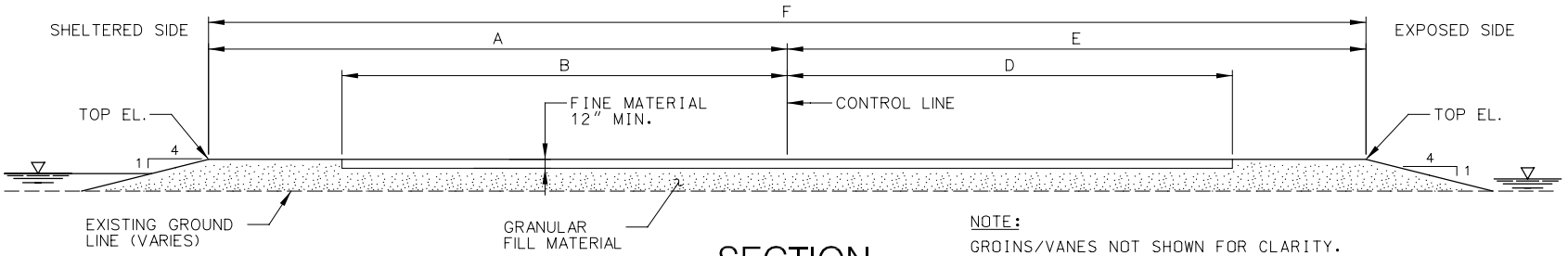
NOTE:

GROINS/VANES NOT SHOWN FOR CLARITY.



SECTION

TYPE A-1 ISLAND

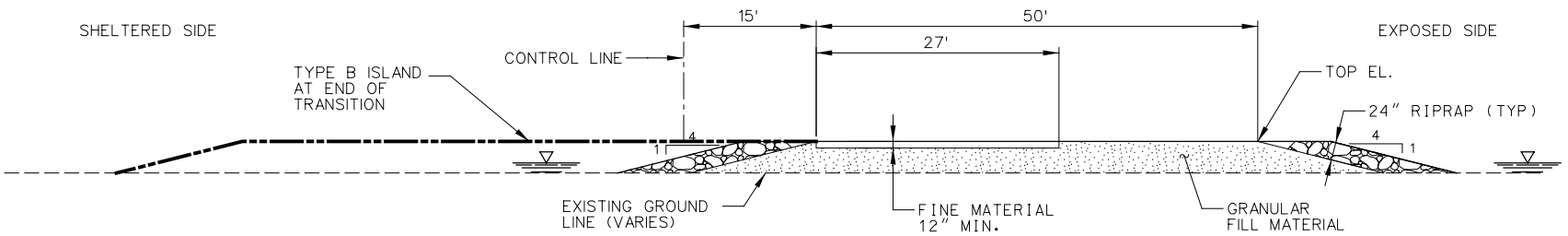


SECTION

TYPE B ISLAND

NOTE:

GROINS/VANES NOT SHOWN FOR CLARITY.



SECTION

TYPE B-1 ISLAND
(SECTION AT END OF ISLAND)

NOTE:

GROINS/VANES NOT SHOWN FOR CLARITY.

PLATE 1

SHEET XX OF XX

HABITAT REHABILITATION & ENHANCEMENT PROGRAM
ISLAND DESIGN MANUAL
STANDARD DETAILS

ISLAND TYPES A & B

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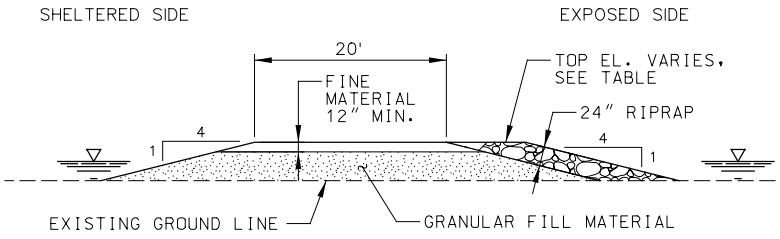
St. Paul District

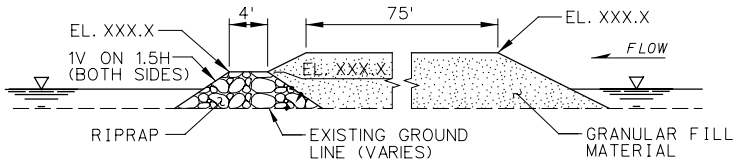


SECTION

TYPE C ISLAND

10 0 10 20

SCALE IN FEET

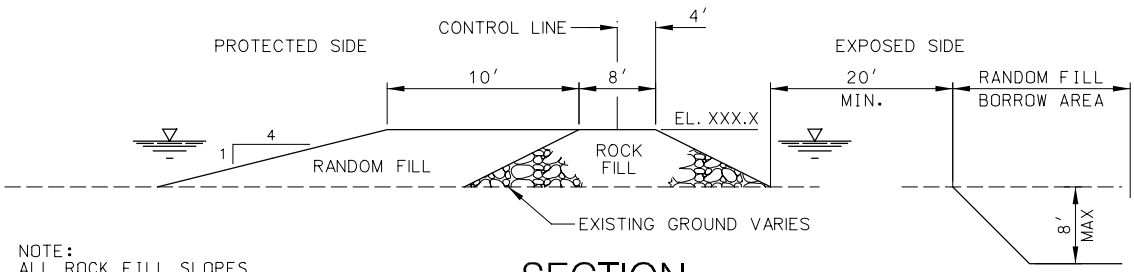


SECTION

TYPE D – SEED ISLAND

10 0 10 20

SCALE IN FEET



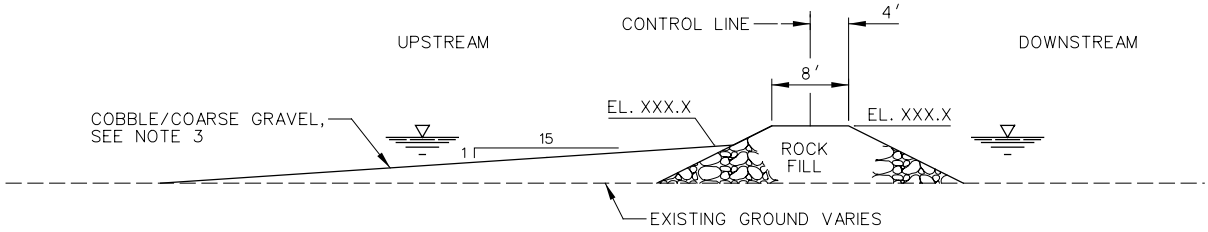
NOTE:
ALL ROCK FILL SLOPES SHALL BE 1V:2H.

SECTION

TYPE E

10 0 10 20

SCALE IN FEET



NOTE:
ALL ROCK FILL SLOPES SHALL BE 1V:2H.

SECTION

TYPE F
FISH SPAWNING HABITAT

10 0 10 20

SCALE IN FEET

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HABITAT REHABILITATION & ENHANCEMENT PROGRAM
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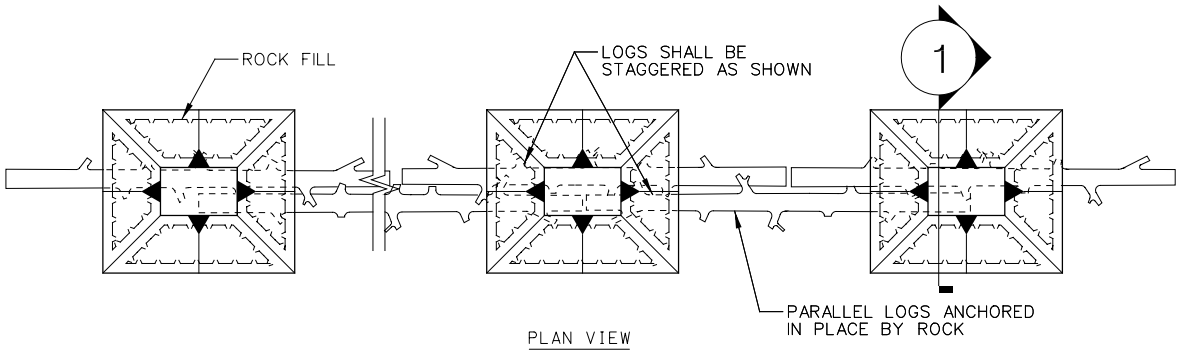
STANDARD DETAILS

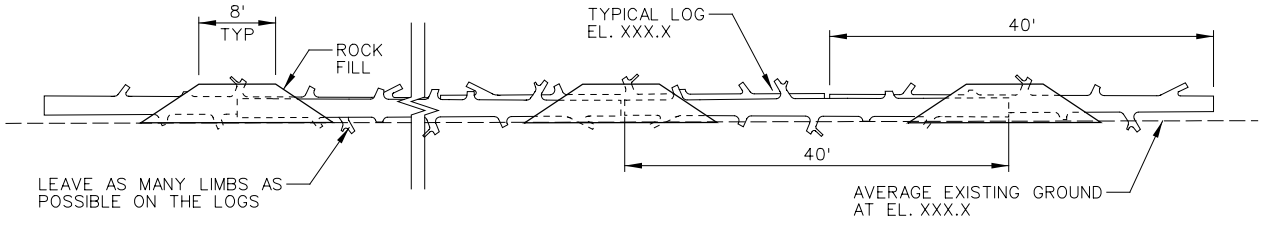
ISLAND TYPES C, D, E & F

PLATE 1

SHEET XX OF XX



PLAN VIEW



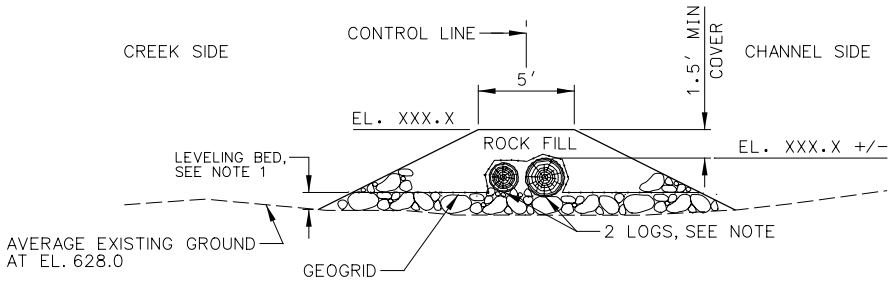
ELEVATION

TYPICAL DETAIL

ROCK/LOG ISLAND

10 0 10 20

SCALE IN FEET



1 SECTION

TYPICAL ROCK/LOG ISLAND

5 0 5 10

SCALE IN FEET

NOTE:

LOGS SHALL BE 40' LONG AND 2' MIN. DIAMETER AT BASE. TRIM LIMBS AS NECESSARY TO ALLOW LOG PLACEMENT TO THE CORRECT ELEVATION. A ROCK FILL LEVELING BED SHALL BE USED TO BRING LOGS TO THE DESIGN ELEVATION. ROCK THICKNESSES WILL VARY.

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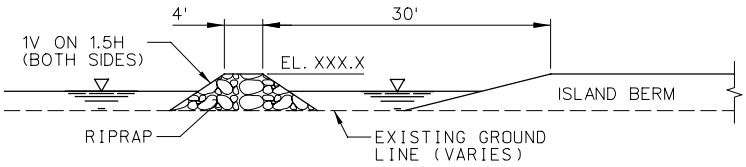
HABITAT REHABILITATION & ENHANCEMENT PROGRAM
ISLAND DESIGN MANUAL
STANDARD DETAILS
ROCK/LOG ISLAND

PLATE 1

SHEET XX OF XX

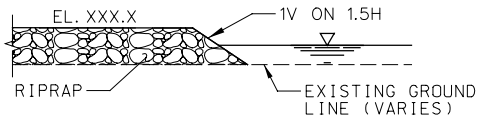


SECTION

ROCK MOUND ALONG ISLAND

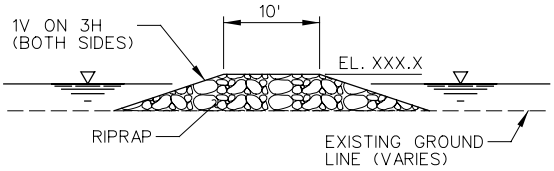
10 0 10 20

SCALE IN FEET



LONGITUDINAL SECTION

THRU ROCK MOUND AT END (TYP)

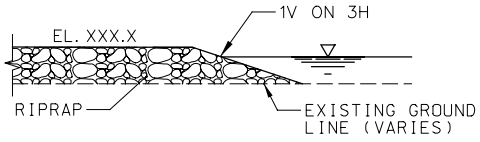


SECTION

ROCK SILL

10 0 10 20

SCALE IN FEET



LONGITUDINAL SECTION

THRU ROCK SILL AT END (TYP)

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St. Paul District

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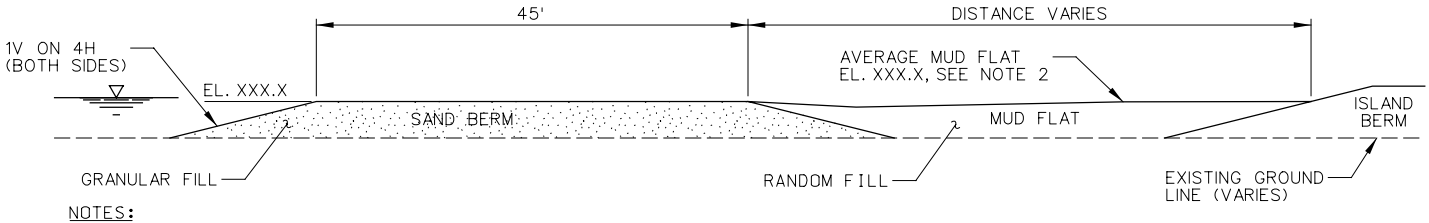
HABITAT REHABILITATION & ENHANCEMENT PROGRAM
ISLAND DESIGN MANUAL
STANDARD DETAILS

ROCK MOUND AND SILL

PLATE 1



NOTES:

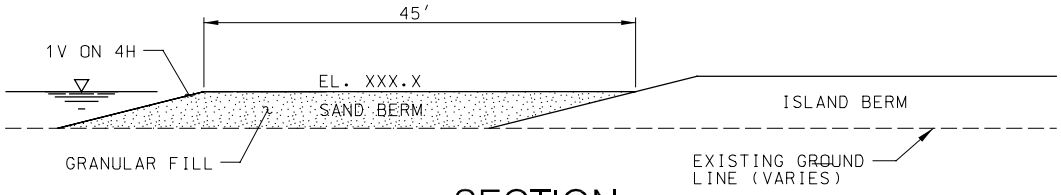
1. THIS SECTION DENOTES FINISHED DIMENSIONS AND ELEVATIONS. DIMENSIONS AND ELEVATIONS NECESSARY DURING CONSTRUCTION TO MEET SEDIMENT RETENTION NEEDS SHALL BE DETERMINED BY THE CONTRACTOR.
2. MUDFLAT MAY VARY BETWEEN EL. XXX.X AND EL. XXX.X. MUDFLATS SHALL SLOPE TOWARD SAND BERMS AND AWAY FROM ISLAND AND TURTLE NESTING STRUCTURES.

TYPICAL SECTION

THRU SAND BERM & MUD FLAT

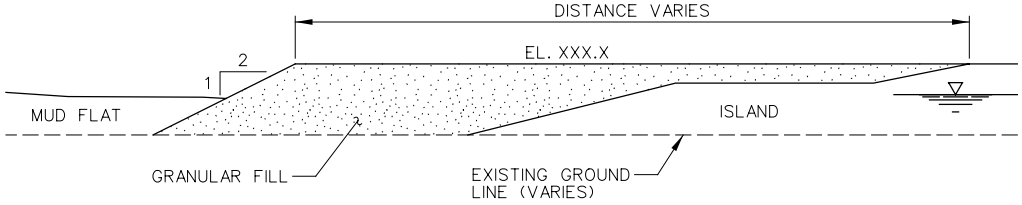
10 0 10 20

SCALE IN FEET



SECTION

TYPICAL SAND FLAT



TYPICAL SECTION

TURTLE NESTING STRUCTURE

10 0 10 20

SCALE IN FEET

US Army Corps of Engineers
St. Paul District

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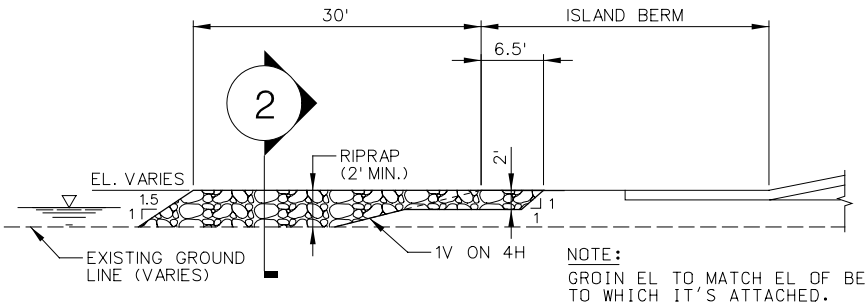
STANDARD DETAILS

MUD/SAND FLATS AND TURTLE NESTING MOUND

PLATE 1

SHEET XX OF XX

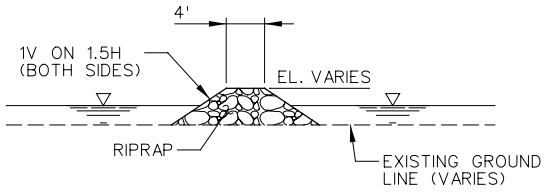


ELEVATION

TYPICAL ROCK GROIN

10 0 10 20

SCALE IN FEET

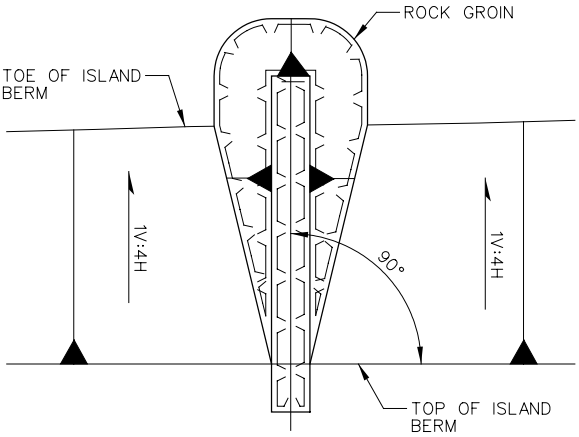


2 SECTION

TYPICAL ROCK GROIN/VANE

10 0 10 20

SCALE IN FEET



PLAN

TYPICAL ROCK GROIN

10 0 10 20

SCALE IN FEET

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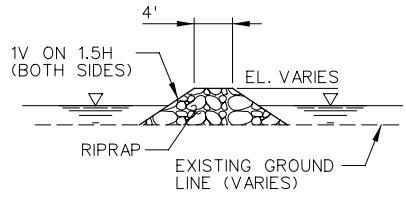
ISLAND DESIGN MANUAL
STANDARD DETAILS

ROCK GROIN

PLATE 1

SHEET XX OF XX

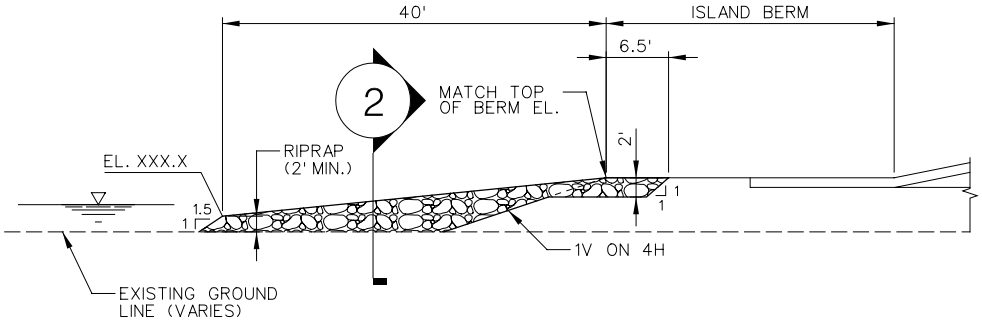


2 SECTION

TYPICAL ROCK GROIN/VANE

10 0 10 20

SCALE IN FEET

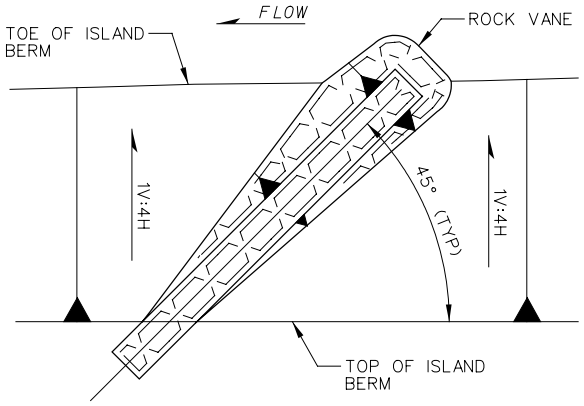


ELEVATION

TYPICAL ROCK VANE

10 0 10 20

SCALE IN FEET

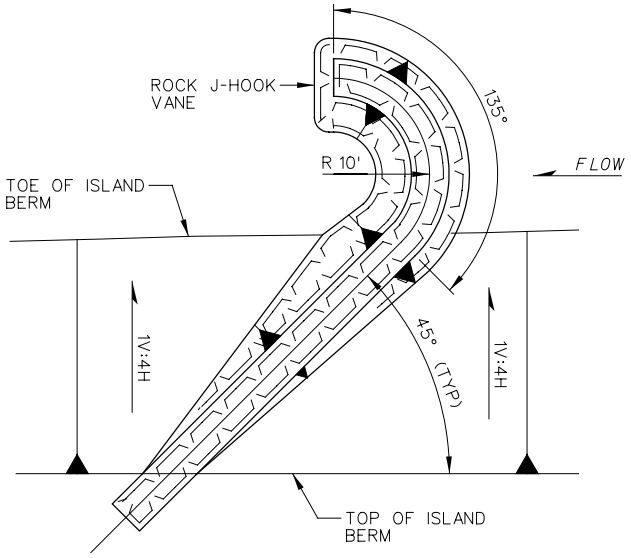


PLAN

TYPICAL ROCK VANE

10 0 10 20

SCALE IN FEET

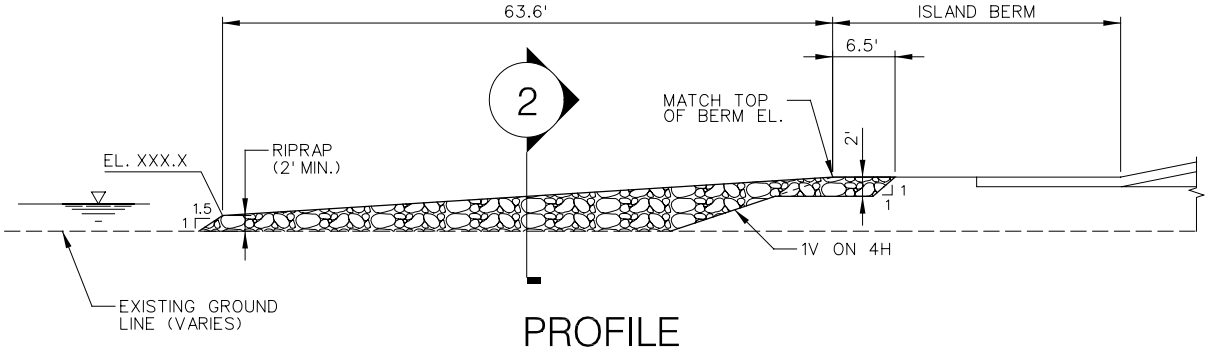


PLAN

TYPICAL ROCK J-HOOK VANE

10 0 10 20

SCALE IN FEET



PROFILE

TYPICAL J-HOOK ROCK VANE

10 0 10 20

SCALE IN FEET

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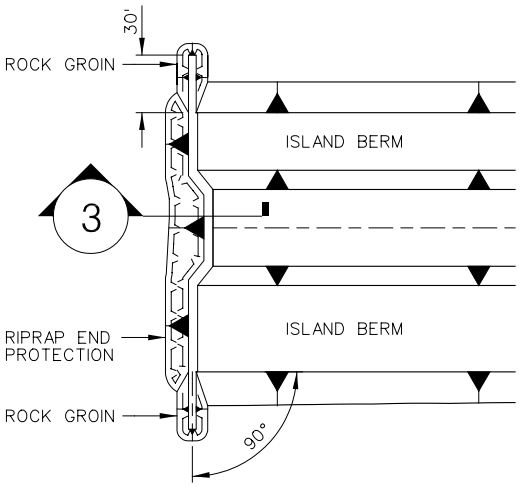
STANDARD DETAILS

ROCK VANES

J-HOOK AND STANDARD

PLATE 1

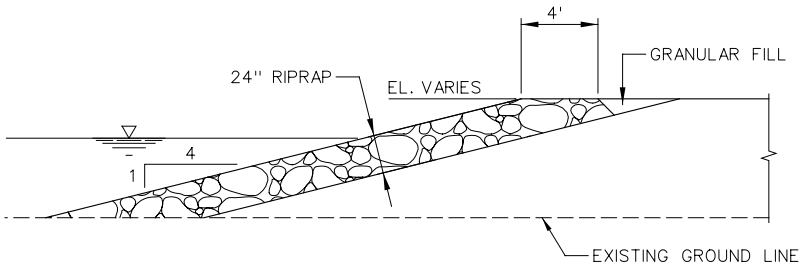
SHEET XX OF XX



PLAN

RIPRAP END PROTECTION – FLAT

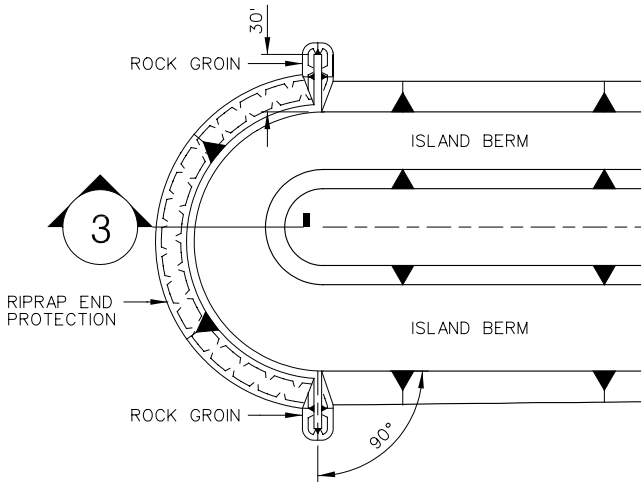
50 0 50 100
SCALE IN FEET



3 SECTION

ISLAND RIPRAP END PROTECTION/
BANK STABILIZATION

5 0 5 10
SCALE IN FEET



PLAN

RIPRAP END PROTECTION – ROUND

50 0 50 100
SCALE IN FEET

US Army Corps of Engineers
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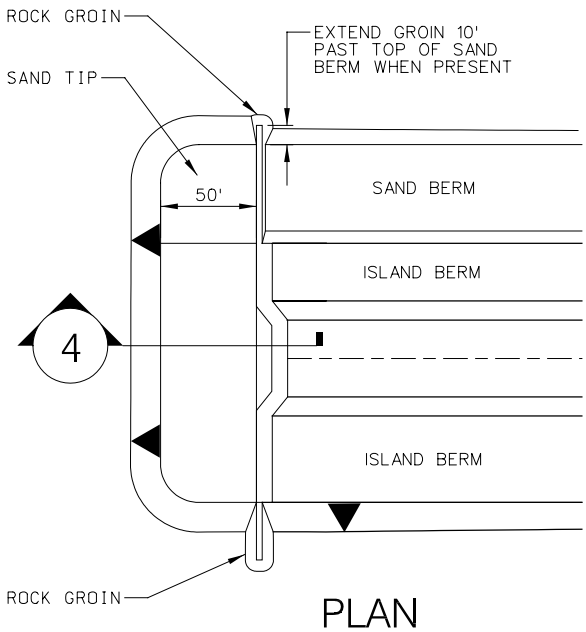
ISLAND END PROTECTION
PLAN AND SECTION

PLATE 1

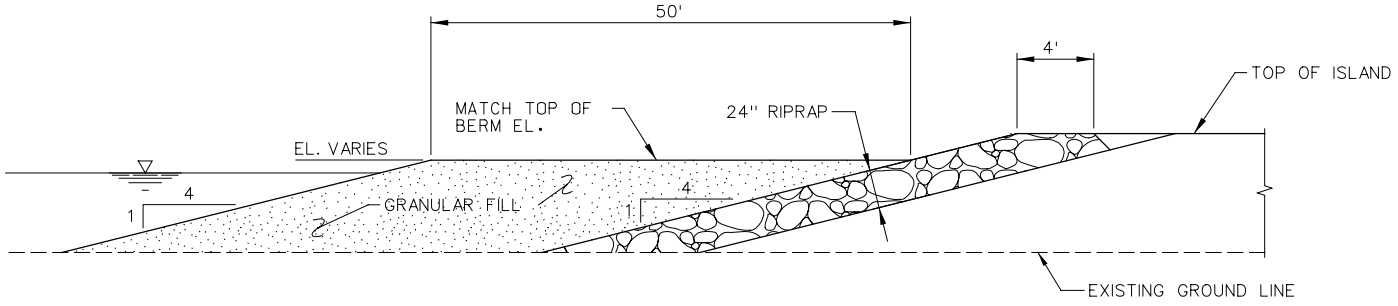
SHEET XX OF XX



PLAN

RIPRAP END PROTECTION WITH SAND TIP

50 0 50 100
SCALE IN FEET



4 SECTION

ISLAND RIPRAP END PROTECTION/ BANK STABILIZATION AND SAND TIP

5 0 5 10
SCALE IN FEET

US Army Corps of Engineers
St. Paul District

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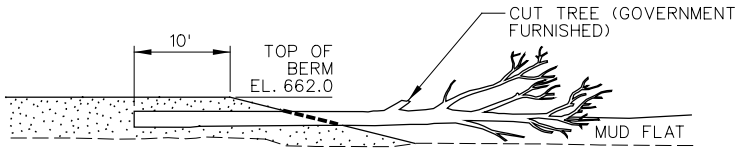
STANDARD DETAILS

ISLAND SAND TIP

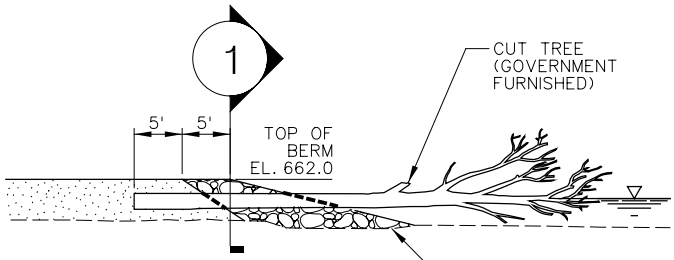
PLATE 1



SECTION

TYPE 1
WILDLIFE LOAFING STRUCTURE

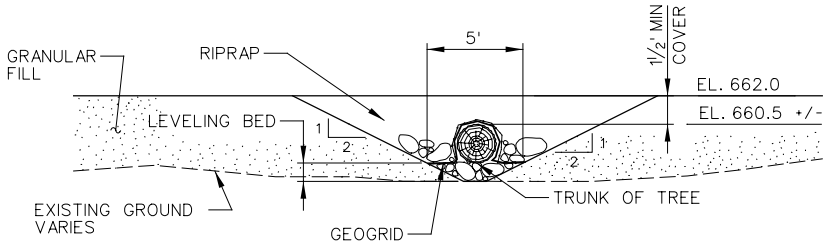
10 0 10 20
SCALE IN FEET



SECTION

TYPE 2
WILDLIFE LOAFING STRUCTURE

10 0 10 20
SCALE IN FEET



1 SECTION

WILDLIFE LOAFING STRUCTURE ANCHORAGE

5 0 5 10
SCALE IN FEET

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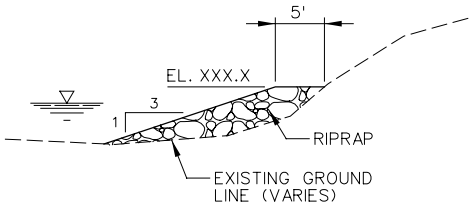
WILDLIFE LOAFING STRUCTURES

PLATE 1

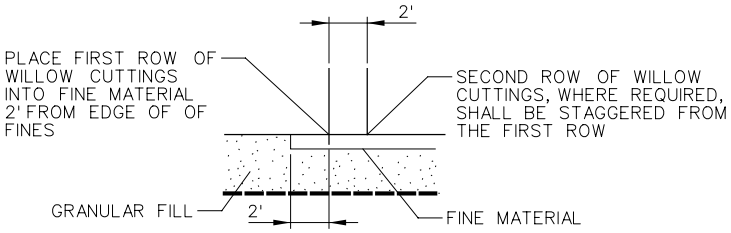


TYPICAL SECTION

RIPRAP BANK PROTECTION

10 0 10 20

SCALE IN FEET

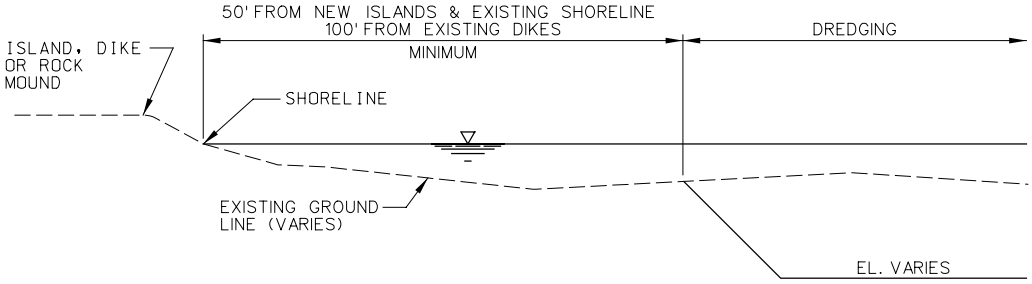


SECTION

WILLOW PLANTING

5 0 5 10

SCALE IN FEET



SECTION

DREDGING

10 0 10 20

SCALE IN FEET

US Army Corps of Engineers
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MISCELLANEOUS DETAILS

PLATE 1

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